STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Dan Leva)
MEETING DATE: June 18, 2003

ITEM: 5A

SUBJECT: Bottling Group, LLC, Hayward, Alameda County – Reissuance of NPDES Permit

CHRONOLOGY: January 1997 – Permit reissued by Board

DISCUSSION: The attached Tentative Order reissues the NPDES permit order for Bottling Group. Bottling Group, formerly New Century Beverage, manufactures and distributes bottled water and soft drinks in Hayward, and employs approximately 375 full-time personnel. For production, city drinking water is purified through a number of steps, including filtration, dechlorination, and demineralization using two reverse osmosis units. A concentrate stream from the reverse osmosis units, is discharged to the Old Alameda Creek flood channel. The discharge averages 110,000 gallons per day.

The Tentative Order establishes effluent limits and provisions based on the Basin Plan, State Implementation Policy, and other Federal Regulations. The Tentative Order establishes compliance schedules for copper and lead because Bottling Group cannot currently comply with final limits. These schedules require Bottling Group to identify and reduce sources of copper and lead, and to propose a work plan for reducing or controlling the pollutants to achieve compliance with the final limits. It also allows Bottling Group to evaluate the feasibility of effluent reclamation and reuse projects, and site specific translators.

We have received no comments on this item.

RECOMMENDATION: Adoption of the Tentative Order

File No. 2199.9320

Appendices:

A - Tentative Order

APPENDIX A
Tentative Order

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE ORDER
NPDES PERMIT NO. CA0030058

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:
BOTTLING GROUP, LLC
HAYWARD, ALAMEDA COUNTY

FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. *Discharger and Permit Application.* The Bottling Group, LLC (hereinafter called the Discharger), formerly the New Century Beverage Company, has applied to the Board for reissuance of waste discharge requirements and a permit to discharge treated wastewater to waters of the State and the United States under the National Pollutant Discharge Elimination System (NPDES).

Facility Description

2. The Discharger manufactures and distributes bottled water and soft drinks in Hayward, and employs approximately 375 full-time personnel. For production, municipally supplied potable water is purified through a number of steps, including filtration, dechlorination, and demineralization using two reverse osmosis (R/O) units. A concentrate stream from the R/O units, is discharged to the Alameda County Flood Control and Water Conservation District Zone 3 Line A (ACFCWCD Flood Channel) at latitude 37°36'54" and longitude 120°5'4". The discharge averages 110,000 gallons per day (gpd), and may be up to an instantaneous maximum of 180,000 gpd.

3. The U.S. EPA and the Board have classified this Discharger as a minor discharger.

Purpose of Order

4. This NPDES permit regulates the discharge of concentrate (brine, or reject water) from the R/O system. Waste Discharge Requirements Order No. 97-007, adopted by the Board on January 15, 1997, used to govern this discharge. This Order rescinds the requirements of Order No. 97-007.

Discharge Description

5. The Discharger uses potable water supplied by the City of Hayward (City) that originates either from Sierra Nevada snowmelt that collects at the Hetch Hetchy Reservoir and is transported via an aqueduct to the San Francisco Bay Area, or from local reservoir water that has been treated by the Sunol Valley Water Treatment Plant (Sunol). The incoming City water contains minerals and metals, and residual chlorine, whose concentration varies based on the chlorination dose at the treatment plant as well as the mixing ratio between the Sunol treated water and the Hetch Hetchy unfiltered water. The quantity and quality of the incoming City water used are important aspects of the Discharger's production, as well as the water quality of the discharge.

6. The feed water entering the facility is purified for the purpose of manufacturing soft drinks and bottled water. The Discharger treats the feed water to reduce dissolved solids, adjust pH, and disinfect. The treatment system includes particulate filtration, R/O, and chemical addition. A diagram of the discharge facility treatment process is shown in Attachment B. The raw water purification system consists of the following steps:

    - Filtration through three Greensand Filters to remove solids, soluble iron, and manganese. A Greensand Filter is a pressure vessel with a filtration bed consisting of an upper layer of anthracite and a bottom layer of manganese greensand. The Greensand Filters are regenerated yearly or as required with potassium permanganate.
    - R/O pretreatment by injection of an antiscalant to prevent membrane fouling, and sodium metabisulfite to reduce the oxidizing effects of chlorine on the R/O membranes;
    - Pre-filtration using three 304 stainless steel cartridge filters each containing 12, 5-micron filter cartridges to remove suspended solids;
    - R/O to remove dissolved minerals from the influent water;
    - Carbon tower filtration of the R/O permeate with granular activated carbon (GAC) to remove trihalomethanes and other taste, color, and odor producing organic molecules by adsorption. The carbon tower is regenerated quarterly;
    - Polishing filtration of the R/O permeate using cartridge elements to remove GAC fines after carbon filtration; and
    - Ultraviolet (UV) sterilization of the R/O permeate to kill bacteria in the final product water.

7. The R/O units remove dissolved minerals from the influent water by passing the influent stream through a sheet of semi-permeable membranes. The R/O system uses pressure to drive water through a microporous membrane against the force of osmotic pressure. Water forced through the membrane is stripped of inorganic ions and organic molecules. The mineral rich side of the stream is termed the concentrate or reject. Water that passes through the membrane is called permeate or product. R/O removes up to 99% of the mineral content of the influent water stream.

8. The Discharger's R/O system is rated to process a maximum influent stream of 900,000 gallons per day (625 gallons per minute) at full operation. Approximately 80% of the influent flow (720,000 gpd) is produced as permeate and piped to a storage tank called the Clearwell for production and other in-house uses. Approximately 20% of the flow (180,000 gpd maximum flow) can be discharged as R/O concentrate. The concentrate is discharged to an onsite storm drain system that connects with an offsite 84-inch County storm sewer main and leads to the wet well of the Alameda County Besco Pump Station and is then lifted and discharged to the ACFCWCD Flood Channel, which drains to Old Alameda Creek, and ultimately flows into San Francisco Bay.

9. The table below presents the quality of the discharge, as indicated in the Discharger's self-monitoring reports submitted for the period from January 2000 through September 2002. Average values represent the average of actual detected values only.

Parameter	Average	Maximum
pH, standard units	--	6.4 – 8.5[1]
Temperature, degrees C	15.7	20.4
TSS, mg/L	1.5	2
TDS, mg/L	354	5430
Residual chlorine, mg/L	0.09	0.168
Antimony, µg/L	0.91	2.9
Arsenic, µg/L	1.07	1.6

Parameter	Average	Maximum
Cadmium, µg/L	0.04	0.05
Chromium (III), µg/L	2.32	6.4
Copper, µg/L	5.1	12
Lead, µg/L	0.99	1.3
Mercury, µg/L	0.002[2]	0.002[2]
Nickel, µg/L	2.53	3.7
Silver, µg/L	0.15	0.15[3]
Thallium, µg/L	0.01	0.01[3]
Zinc, µg/L	20	26
Chloroform, µg/L	93	110
Dichlorobromomethane, µg/L	4.75	7.2
Methyl bromide, µg/L	8.4	8.4[4]

[1] This represents the range of pH values. There was one exceedance of the effluent limitation.
[2] Based on the single available ultra-clean mercury measurement.
[3] All detected values were the same value.
[4] There was only one detected value for methyl bromide.

Total suspended solids concentrations during January 2000 through September 2002 were above detection levels in three of 33 samples. Detected concentrations ranged from 1 mg/L to 2 mg/L. Residual chlorine concentrations were above detection levels in three of 34 samples. Detected concentrations ranged between 0.056 mg/L and 0.168 mg/L.

10. *Residual Chlorine.* The Board issued Complaint No. R2-2002-0052 to the Discharger on May 15, 2002, based on findings of two violations of the residual chlorine effluent limitation (0.0 mg/L) contained in Order No. 97-007. The Discharger requested to conduct a residual chlorine attenuation study and submit the results to the Board, for consideration of sampling frequency and sampling location.

    Based on the final report (Weiss Associates, January 2003), the Board finds that monthly monitoring, and regular inspection of the dechlorination system, is sufficient for determining compliance. Among the factors considered are: 1) Residual chlorine of influent water is relatively low (average of 0.62 mg/L, maximum of 1.0 mg/L), which minimizes risk of high residual chlorine in effluent; 2) The greensand filters and storm drain interceptor exert chlorine demand and thus significantly remove the residual chlorine of the influent (by 70 percent or more); 3) Chlorine is not added to the process, eliminating the risk found at traditional waste water treatment plants, where dosing of chlorine can lead to very high residual chlorine; 4) The ratio of sodium metabisulfite to residual chlorine is over twice that required for complete reaction; and 5) The sodium metabisulfite pumps have an alarm mechanism, by which influent/discharge is immediately stopped if they fail.

Applicable Plans, Policies and Regulations

Basin Plan

11. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21,1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (SWRCB) and the Office of Administrative Law on July 20, 1995 and November 13, 1995, respectively. A summary of the regulatory changes is contained in Title 23 of the California Code of Regulations, Section 3912. The Basin Plan identifies beneficial uses and water quality objectives (WQOs) for waters of the state in the Region, including surface waters and

groundwaters. The Basin Plan also identifies discharge prohibitions intended to protect beneficial uses. This Order implements the Board's Basin Plan.

Beneficial Uses

12. This NPDES permit protects all beneficial uses of the receiving water (ACFCWCD Flood Channel) and of downstream waterbodies, such as the Old Alameda Creek. Protection of the beneficial uses of specifically named waterbodies and its tributaries is based on Chapter 2 of the Basin Plan. The beneficial uses designated in the Basin Plan for Alameda Creek and its tributaries include:

    a. Agricultural Supply
    b. Cold Freshwater Habitat
    c. Groundwater Recharge
    d. Fish Migration
    e. Water Contact Recreation
    f. Non-Contact Water Recreation
    g. Fish Spawning
    h. Warm Freshwater Habitat
    i. Wildlife Habitat

Discharge Prohibition Exception

13. The Basin Plan contains a prohibition of discharge of any wastewater which has particular constituents of concern to beneficial uses (1) at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1; or (2) into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof. In issuing the previous Order, the Board determined that these three prohibitions would not apply to the discharge because the discharge did not contain particular constituents of concern to beneficial uses, provided the discharge limitations contained in the Order are met. For this Order, the Board determines the exception from the discharge prohibition continues to be appropriate. Priority pollutants will specifically not be present in the discharge at levels of concern to beneficial uses because the reasonable potential analysis (as described in Findings 31 to 36) indicates that: (1) only copper and lead are currently observed in the discharge at levels that could cause exceedances of water quality criteria, and (2) this Order includes specific compliance schedules for lead and copper to achieve water quality-based effluent limits that are protective of beneficial uses.

State Implementation Policy (SIP)

14. The SWRCB adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (also known as the State Implementation Policy or SIP) on March 2, 2000 and the Office of Administrative Law (OAL) approved the SIP on April 28, 2000. The SIP applies to discharges of toxic pollutants in the inland surface waters, enclosed bays and estuaries of California subject to regulation under the State's Porter-Cologne Water Quality Control Act (Division 7 of the Water Code) and the federal Clean Water Act. The SIP establishes implementation provisions for priority pollutant criteria promulgated by the U.S. EPA through the National Toxics Rule (NTR) and California Toxics Rule (CTR), and for priority pollutant objectives established by the Regional Water Quality Control Boards (RWQCBs) in their water quality control plans (basin plans). The SIP also establishes monitoring requirements for 2,3,7,8-TCDD equivalents, chronic toxicity control provisions, and Pollutant Minimization Programs.

California Toxics Rule (CTR)

15. On May 18, 2000, the U.S. EPA published the *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California* (Federal Register, Volume 65,

Number 97, 18 May 2000). These standards are generally referred to as the CTR. The CTR specified water quality criteria (WQC) for numerous pollutants, of which some are applicable to the Discharger's effluent discharges.

Other Regulatory Bases

16. WQOs/WQC and effluent limitations in this permit are based on the SIP; the plans, policies and WQOs and criteria of the Basin Plan; CTR (Federal Register Volume 65, 97); *Quality Criteria for Water* (U.S. EPA 440/5-86-001, 1986 and subsequent amendments, "U.S. EPA Gold Book"); applicable Federal Regulations (40 CFR Parts 122 and 131); NTR (57 FR 60848, 22 December 1992 and 40 CFR Part 131.36(b)); NTR Amendment (Federal Register Volume 60, Number 86, 4 May 1995, pages 22229-22237); U.S. EPA December 27, 2002 "National Recommended Water Quality Criteria" compilation (Federal Register Vol. 67, No. 249); and Best Professional Judgment (BPJ) as defined in the Basin Plan. Where numeric effluent limitations have not been established or updated in the Basin Plan, 40 CFR 122.44(d) specifies that water quality-based effluent limitations (WQBELs) may be set based on U.S. EPA criteria and supplemented where necessary by other relevant information to attain and maintain narrative WQC to fully protect designated beneficial uses. Discussion of the specific bases and rationale for effluent limits are given in the associated Fact Sheet for this Permit, which is incorporated as part of this Order.

17. In addition to the documents listed above, other U.S. EPA guidance documents upon which BPJ was developed may include in part:

- Region 9 Guidance For NPDES Permit Issuance, February 1994;
- U.S. EPA Technical Support Document for Water Quality-Based Toxics Control (March 1991) (TSD);
- Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria, October 1, 1993;
- Whole Effluent Toxicity (WET) Control Policy, July 1994;
- National Policy Regarding Whole Effluent Toxicity Enforcement, August 14, 1995;
- Clarifications Regarding Flexibility in 40 CFR Part 136 Whole Effluent Toxicity (WET) Test Methods, April 10, 1996;
- Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final, May 31, 1996;
- Draft Whole Effluent Toxicity (WET) Implementation Strategy, February 19, 1997.

Basis for Effluent Limitations

General Basis

18. *Federal Water Pollution Control Act.* Effluent limitations and toxic effluent standards are established pursuant to sections 301 through 305, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharges herein.

Conventional Pollutant Effluent Limits

19. *Total Suspended Solids.* There are currently no technology-based effluent limitation guidelines developed for R/O facilities. The total suspended solids (TSS) limitation in Order No. 97-007 are not carried over to this NPDES Order, since the maximum TSS effluent concentration (2.0 mg/L) is significantly less than the Basin Plan limitations for sewage treatment facilties upon which the previous TSS limits were based (30-day average of 30 mg/L, 7-day average of 45 mg/L). Furthermore, it is unlikely that the discharge will contain suspended solids because the raw water is potable city water that has been further filtered (currently with greensand and 5-micron filters) before it is processed in the R/O units. Backwash from the filters discharge to the sanitary sewer. Therefore, the TSS of the effluent is unlikely to cause or contribute to impairment of the receiving water.

20. *Residual Chlorine:* An effluent limitation for residual chlorine (instantaneous maximum of 0.0 mg/L) is carried over to this NPDES Order from Order No. 97-007. The limitation is based on the Basin Plan (Table 4-2) and BPJ, which indicates the potential risk of residual chlorine in the influent persisting in the discharge. A residual chlorine level at or above 0.05 mg/L, which is the limit of detection in standard methods defined in Standard Methods for the Examination of Water and Wastewater, is considered a violation.

Water Quality-Based Effluent Limitations

21. Toxic substances are regulated by WQBELs derived from water quality objectives listed in the Basin Plan Tables 3-3 and 3-4, the NTR, U.S. EPA recommended criteria, the CTR, the SIP, and/or BPJ. Numeric WQBELs are required for all constituents that have reasonable potential to cause or contribute to an excursion above any State WQO/WQC. Reasonable potential is determined and final WQBELs are developed using the methodology outlined in the SIP. If the Discharger demonstrates that the final limits will be infeasible to meet and provides justification for a compliance schedule, then interim limits are established, with a compliance schedule to achieve the final limits. Further details about the effluent limitations are given in the following findings and the associated Fact Sheet.

Applicable Water Quality Objectives/Criteria

22. The WQO and WQC applicable to the receiving waters for this discharge are from the Basin Plan, the CTR, and the NTR.

    a. The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in freshwater, lead, mercury, nickel, silver, zinc, and cyanide (see also c. below). The narrative toxicity objective states in part "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states in part "[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life." Effluent limitations and provisions contained in this Order are designed to implement these objectives, based on current available information.

    b. The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries such as here, except that where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain priority toxic pollutants. The Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).

c. The NTR established numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta.

Basin Plan Receiving Water Salinity Policy

23. The Basin Plan states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable WQOs. Freshwater objectives apply to discharges to waters both outside the zone of tidal influence and with salinities lower than 5 parts per thousand (ppt) at least 75 percent of the time. Saltwater objectives shall apply to discharges to waters with salinities greater than 5 ppt at least 75 percent of the time. For discharges to waters with salinities in between the two categories or tidally influenced freshwaters that support estuarine beneficial uses, the objectives shall be the lower of the salt or freshwater objectives, based on ambient hardness, for each substance. For constituents with water quality objectives specified in the Basin Plan, it is appropriate to use the Basin Plan definition for determining if the receiving water is fresh, marine, or estuarine.

CTR Receiving Water Salinity Policy

24. The CTR states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable WQC. Freshwater criteria shall apply to discharges to waters with salinities equal to or less than one ppt at least 95 percent of the time. Saltwater criteria shall apply to discharges to waters with salinities equal to or greater than 10 parts per thousand (ppt) at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the criteria shall be the lower of the salt or freshwater criteria, (the latter calculated based on ambient hardness), for each substance. In applying CTR criteria it is appropriate to use the CTR definition for determining if the receiving water is fresh, marine, or estuarine.

Receiving Water Salinity and Hardness

25. a. Salinity. The salinity of the receiving water is characterized by two measurements taken 50 feet downstream from the point of discharge, where the discharge and ambient background water are well mixed: 0.12 ppt (collected on March 7, 2003, during wet weather conditions) and 2.2 ppt (collected on October 29, 2003, during dry weather conditions). Based on these two measurements, the receiving water is freshwater by the Basin Plan definition, and estuarine by the CTR definition. Therefore, the effluent limitations specified in this Order for discharges to Alameda Creek are based on freshwater Basin Plan WQOs and the lower of freshwater and saltwater CTR and NTR WQC.

b. Hardness. Some WQOs and WQC are hardness dependent. The Discharger has measured the hardness twice at a point in the receiving water 50 feet downstream of the point of discharge: < 1 mg/L (collected on March 7, 2003, during wet weather conditions) and 110 mg/L (collected on October 29, 2003, during dry weather conditions). Due to the few number of measurements, the lower value was selected because it is more protective of the environment. A default hardness value of 25 mg/L has generally been used in deriving freshwater aquatic life criteria for metals when the ambient (or actual) hardness value is below 25 mg/L, since the data used to develop the hardness equations for deriving aquatic life criteria for metals are usually in the range of 25 to 400 mg/L. In determining the WQOs and WQC for this Order, the Board assumed a hardness of 25 mg/L.

Receiving Water Ambient Background Data Used in Calculating WQBELs

26. There are insufficient ambient background data available for Alameda Creek. By letter dated August 6, 2001, the Board's Executive Officer required the Discharger conduct additional monitoring

pursuant to section 13267 of the California Water Code. An interim report was submitted on May 23, 2003. Because the preparation of this Order is in advance of this date, the data collected thus far in Alameda Creek has not been considered in the requirements of this permit.

Total Maximum Daily Loads (TMDLs) and Waste Load Allocations (WLAs)

27. *Constituents Identified in the 303(d) List*. On May 12, 1999, the U.S. EPA approved a revised list of impaired waterbodies prepared by the State. The list (hereinafter referred to as the 303(d) list) was prepared in accordance with Section 303(d) of the federal Clean Water Act to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources.

28. Alameda Creek and the lower San Francisco Bay are both listed as impaired waterbodies. Alameda Creek is impaired by diazinon, a household pesticide. The Board does not expect the Discharger to be a source of diazinon to Alameda Creek. Alameda Creek is a tributary to lower San Francisco Bay and may thus contribute to impairments of it. The pollutants impairing lower San Francisco Bay include copper, mercury, nickel, PCBs total, dioxin and furan compounds, chlordane, DDT, dieldrin, diazinon, dioxin TEQ-like PCBs, and exotic species.

29. The TMDLs will establish waste load allocations (WLAs) and load allocations for point sources and non-point sources, respectively, and will result in achieving the water quality standards for the waterbody. The final effluent limitations for this Discharger may be affected by WLAs that are derived from the TMDLs.

30. *Schedule for TMDL and WLAs*. Based on the 303(d) list of pollutants impairing Alameda Creek and the lower San Francisco Bay, the Board plans to adopt TMDLs for these pollutants no later than 2010, with the exception of dioxin and furan compounds. The Board defers development of the TMDL for dioxin and furan compounds to the U.S. EPA. Future review of the 303(d) list for Alameda Creek and lower San Francisco Bay may result in revision of the schedules and/or provide schedules for other pollutants.

Specific Basis

Reasonable Potential Analysis

31. As specified in 40 CFR 122.44(d) (1) (i), permits are required to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." Using the method prescribed in Section 1.3 of the SIP, Board staff has analyzed the effluent data to determine if the discharge has a reasonable potential to cause or contribute to an excursion above a State water quality standard ("Reasonable Potential Analysis" or "RPA"). For all parameters that have reasonable potential, numeric WQBELs are required. The RPA compares the effluent data with numeric and narrative WQOs in the Basin Plan and numeric WQC from the U.S. EPA Gold Book, the NTR, and the CTR.

32. *RPA Methodology*. The method for determining RPA involves identifying the observed maximum pollutant concentration in the effluent (MEC) and background receiving water (B) for each constituent, based on effluent concentration data. The RPA for all constituents is based on zero dilution, according to section 1.3 of the SIP. There are three triggers in determining reasonable potential.
    a. The first trigger is activated when the MEC is greater than or equal to the lowest applicable WQO/WQC, which has been adjusted for pH, hardness (assumed in this permit analysis at 25 mg/L), and translator data, if appropriate. An MEC that is greater than or equal to the (adjusted) WQO/WQC means that there is reasonable potential for that constituent to cause or contribute to an excursion above the WQO/WQC and a WQBEL is required. (Is the MEC≥WQO/WQC?)
    b. The second trigger is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO/WQC and the MEC is less than the adjusted WQO/WQC. If B is greater than the adjusted WQO/WQC, then a WQBEL is required. (Is B>WQO/WQC?). As indicated in Finding 29, there are insufficient background data currently available for the receiving water to complete this step in the RPA. When such data are collected as required by the August 6, 2001 letter, Board staff will evaluate the need for WQBELs, as appropriate.
    c. The third trigger is activated after a review of other information determines that a WQBEL is required even though both MEC and B are less than the WQO/WQC. A limit is only required under certain circumstances to protect beneficial uses.

33. *Summary of RPA Data and Results.* The RPA was based on effluent monitoring data submitted with the permit renewal application, sampled during 1996 and 2001. Four data points for most metals are available from 1996 sampling. Only one data point, collected in 2001, is available for chromium (III and VI), mercury, cyanide, and dioxins and furans. Two data points for most other priority pollutants in the CTR are available, one sample from 1996 and one from 2001. Based on trigger one of the RPA methodology described above and in the SIP, copper and lead have been found to have reasonable potential to cause or contribute to an excursion above WQOs/WQC. Based on the RPA, numeric WQBELs are required to be included in the permit for these constituents.

34. Board staff recognizes that as a result of the August 6, 2001 letter, additional effluent and background water quality data will be submitted coinciding with the adoption of this Order. Upon evaluation of the additional data, this Order contains a provision that allows the permit to be reopened to establish limits if new data show there is reasonable potential.

35. *RPA Determinations*. The MEC, WQOs, bases for the WQOs, background concentrations used and reasonable potential conclusions from the RPA are listed in the following table for all constituents analyzed. The RPA results for some of the constituents in the CTR were not able to be determined because of the lack of background data, an objective, or effluent data. (Further details on the RPA can be found in the Fact Sheet.)

Constituent	WQO/ WQC (µg/L)	Basis[1]	MEC outfall 001 (µg/L)	Maximum Ambient Background Conc. (µg/L)	Reasonable Potential
Arsenic	190	BP, fw	1.6	Not Available (NA)	No
Cadmium	0.382	BP, fw, H=25	0.05	NA	No
Chromium(VI)	11	BP, fw	< 10	NA	No
Copper*	3.62	BP, fw, H=25	12	NA	Yes
Lead	0.545	BP, fw, H=25	1.3	NA	Yes

Constituent	WQO/ WQC (µg/L)	Basis[1]	MEC outfall 001 (µg/L)	Maximum Ambient Background Conc. (µg/L)	Reasonable Potential
Mercury*	0.025	BP, fw	0.002[3]	NA	CD[4]
Nickel*	48.8	BP, fw, H=25	3.7	NA	No
Selenium	5.0	NTR	< 0.6	NA	No
Silver	0.374	BP, fw, H=25	0.15	NA	CD[4]
Zinc	32.75	BP, fw, H=25	26	NA	CD[4]
Cyanide	5.2	BP, fw	< 10	NA	No
Dioxin TEQ*	$1.4x10^{-8}$	CTR	< 0.00043	NA	No
CTR #s 1, 3, 5a, 12, 15-126 except 16	Various or no WQC	CTR	Non-detect, less than WQC, no data	Less than WQC or not available	No or Unknown

* = Constituents on 303(d) list for the lower San Francisco Bay.

1. RPA based on the following: Hardness (H), 25 in mg/L as $CaCO_3$; BP = Basin Plan; CTR = California Toxics Rule; NTR=National Toxics Rule; fw = freshwater; sw = saltwater;
2. Translators are based on the CTR.
3. Based on the single available ultra-clean mercury measurement.
4. CD = Cannot determine due to limited data. See Finding No. 36 below.

36. *Uncertainties of RPA.* Board staff used the below analysis to determine the appropriate monitoring frequency for constituents that have WQO/WQC that are aquatic life driven. For silver and zinc, the RPA results are based on a limited data set of four samples. For mercury, the RPA results are based on a single sample. This limited data set may not accurately reflect the full range of concentrations for these constituents. To determine if a larger data set might trigger reasonable potential for these constituents, Board staff determined the maximum projected concentration of each constituent in accordance with the methodology described in Technical Support Document for Water Quality-Based Toxics Control (Technical Support Document) published by the USEPA Publication No. 505/2-90-001 and compared it with the most stringent water quality objective. For a 99% confidence level with only one data point (mercury) or four data points (silver and zinc), the Technical Support Document (p. 53-54) indicates that the projected MEC is determined by multiplying the actual MEC by 13.2 or 4.7, respectively. The results of this analysis are shown in the table below:

Constituent	Projected MEC (µg/L)	WQO/WQC (µg/L)	Projected MEC > WQO/WQC = More Data Necessary?
Mercury	0.026	0.025	Yes = annual monitoring
Silver	0.705	0.15	Yes = quarterly monitoring
Zinc	122.0	26.	Yes = quarterly monitoring

Interim Limits with Compliance Schedules

37. Based on a report dated March 13, 2003, the Discharger has demonstrated infeasibility to meet the WQBELs calculated according to Section 1.4 of the SIP for copper and lead. Therefore, this Order establishes compliance schedules for these pollutants. Since this Order reinterprets the Basin Plan numeric criteria for copper and lead using the new policies established in the SIP, and this will result in more stringent effluent limitations than in the prior permit, this Order establishes copper and lead compliance schedules until March 31, 2010, ten years (using full months) from the effective date of the SIP (April 28, 2000), per Section 4 of the Basin Plan. The basis for these schedules is further described in Attachment 5 of the Fact Sheet.

Specific Pollutants

38. *Mercury*. The monitoring data for mercury consist of nine data points: four from 1996 and one from 2001. The 1996 data show two detected values of mercury (0.02 µg/L and 0.04 µg/L). These data, however, were collected prior to the required use of ultra-clean sampling techniques and low-level analytical Method 1631B, and are thus likely affected by sample contamination. The analysis in 2001 was performed using the ultra-clean technique and the recommended low-level analytical Method 1631B. The 2001 result was 0.002 µg/L, which is below the most stringent applicable criteria of 0.025 µg/L. As discussed in Finding 36, the Board determines that insufficient mercury data are currently available to determine RP for mercury. The Discharger shall be required to take annual measurements of mercury in the effluent, using the ultra-clean sampling technique. Upon evaluation of the additional data, the Order can be re-opened to establish limits if new data show there is reasonable potential for mercury. Therefore, water quality-based effluent limitations are not included in this Order for mercury. Upon evaluation of the additional data, the Order can also be re-opened to remove the requirement for monitoring if new data demonstrate there is no reasonable potential for mercury.

39. *Dioxin TEQ.*
    (1) The CTR establishes a numeric human health WQC of 0.014 picograms per liter (pg/l) for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) based on consumption of aquatic organisms.
    (2) The preamble of the CTR states that California NPDES permits should use toxicity equivalents (TEQs) where dioxin-like compounds have reasonable potential with respect to narrative criteria. The preamble further states that U.S. EPA intends to use the 1998 World Health Organization Toxicity Equivalence Factor (TEF)[1] scheme in the future and encourages California to use this scheme in State programs. Additionally, the CTR preamble states U.S. EPA's intent to adopt revised water quality criteria guidance subsequent to their health reassessment for dioxin-like compounds.
    (3) The SIP applies to all toxic pollutants, including dioxins and furans. The SIP requires a limit for 2,3,7,8-TCDD, if a limit is necessary, and requires monitoring for 1 year (once during dry weather and once during wet weather) during a 3 year-period by all minor NPDES dischargers for the other sixteen dioxin and furan compounds.
    (4) The Basin Plan contains a narrative WQO for bio-accumulative substances:
    "Many pollutants can accumulate on particulates, in sediments, or bio-accumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered."
    This narrative WQO applies to dioxin and furan compounds, based in part on the scientific community's consensus that these compounds associate with particulates, accumulate in sediments, and bio-accumulate in the fatty tissue of fish and other organisms.
    (5) The U.S. EPA's 303(d) listing determined that the narrative objective for bio-accumulative pollutants was not met because of the levels of dioxins and furans in fish tissue.
    (6) The data collected to date show one sample in which dioxin was not detected, but the level of detection is above the CTR criteria. Based on the nature of the discharge, dioxins and furans are not expected to be present in the effluent. Therefore, based on the Board's BPJ, there is no reasonable potential for dioxin, and no additional monitoring is required for dioxin.

[1] The 1998 WHO scheme includes TEFs for dioxin-like PCBs. Since dioxin-like PCBs are already included within "Total PCBs", for which the CTR has established a specific standard, dioxin-like PCBs are not included in this Order's version of the TEF scheme.

40. *Permit Reopener*. This Order includes a reopener provision to allow numeric effluent limitations to be added for any constituent that exhibits reasonable potential. The Board will make this determination based on monitoring results.

Development of Effluent Limitations

Dilution and Assimilative Capacity

41. Discharge is into the engineered ACFCWCD Flood Channel, that during the dry season has only one other significant source of flow approximately one mile upstream. The upstream source, Kobe Precision, Inc. (NPDES Permit No. CA0030112), is permitted to discharge 100,000 gallons per day of a reverse osmosis brine similar to the Discharger's. The actual dilution received by the Discharger's discharge in the channel has not been modeled or measured. Due to limited upstream freshwater flows during the dry weather, the discharge is classified by the Board as a shallow water discharge. Therefore, effluent limitations are calculated assuming no dilution (D=0).

Copper

42. *Copper Water Quality Objectives*. To protect fresh water aquatic life at a hardness of 25 mg/L, the Basin Plan specifies objectives for copper of 3.6 µg/L as a 4-day average and 4.8 µg/L as a 1-hour average.

43. *Copper Effluent Limitations.* Based on the RPA, there is reasonable potential for exceedances of the WQC for copper in the subject discharge. The Discharger has demonstrated and the Board verified that the calculated WQBELs presented in the Fact Sheet, as a point of reference (average monthly effluent limit of 2.4 µg/L and maximum daily effluent limit of 4.8 µg/L) will be infeasible to meet. Board staff considered self-monitoring data from 1996 and 2002 (copper concentrations ranged from 1.6 µg/L to 12 µg/L) to develop an interim limit. The data, however, consisted of 8 measurements (7 detected values), and therefore, it was not possible to perform a meaningful statistical evaluation of current treatment performance. The SIP requires the interim numeric effluent limit for the pollutant be based on either current treatment facility performance, or on the previous Order's limitation, whichever is more stringent. As current sample results for copper are not sufficient to perform a meaningful analysis, and the previous Order does not contain an effluent limitation for copper, this Order does not include an interim limit for copper. The Discharger will collect additional monitoring data under the requirements of this Order. When additional data become available, the Board will develop an interim limit, as appropriate.

44. *Copper Source Control.* This Order requires the Discharger to develop pollution prevention and source control programs to maximize practicable control over copper sources in the plant. It further requires the Discharger to propose any additional measures or investigations that are necessary to identify sources for reduction to comply with the final limits by March 31, 2010.

Lead

45. *Lead Water Quality Objectives.* To protect fresh water aquatic life at a hardness of 25 mg/L, the Basin Plan specifies objectives for lead of 0.55 µg/L as a 4-day average and 13.98 µg/L as a 1-hour average.

46. *Lead Effluent Limitations.* Based on the RPA, there is reasonable potential for exceedances of the WQC for lead in the subject discharge. The Discharger has demonstrated and the Board verified that the calculated WQBELs presented in the Fact Sheet, as a point of reference (average monthly effluent limit of 0.45 µg/L and maximum daily effluent limit of 0.9 µg/L) will be infeasible to meet. Board staff considered self-monitoring data from 1996 (lead concentrations ranged from <0.3 µg/L to 1.3 µg/L) to develop an interim limit. The data, however, only contained 8 measurements (3 detected

values), and therefore, it was not possible to perform a meaningful statistical evaluation of current treatment performance. The SIP requires the interim numeric effluent limit for the pollutant be based on either current treatment facility performance, or on the previous Order's limitation, whichever is more stringent. As current sample results for lead are not sufficient to perform a fmeaningful analysis, and the previous Order does not contain an effluent limitation for lead, this Order does not include an interim limit for lead. The Discharger will collect additional lead monitoring data under the requirements of this Order. When additional data become available, the Board will develop an interim limit, as appropriate.

47. *Lead Source Control.* This Order requires the Discharger to develop pollution prevention and source control programs to maximize practicable control over lead sources in the plant. It further requires the Discharger to propose any additional measures or investigations that are necessary to identify sources for reduction to comply with the final limits by March 31, 2010.

Whole Effluent Acute Toxicity

48. This Order includes effluent limits for whole effluent acute toxicity. Compliance evaluation is based on 96-hour static bioassays, using approved U.S. EPA test methods for acute and chronic toxicity bioassays specified in 40CFR 136 (currently 5th edition). The previous Order included a limit, with quarterly testing required. The frequency of monitoring is reduced to annual, since the Discharger's monitoring data indicate that from 2000-2002 survival rates ranged from 75-100 percent, which complies with effluent limitations, and indicates a reduced risk for permit violation. Some dischargers have identified several practical and technical issues that need to be resolved before implementing the 5th Edition. The primary unresolved issue is the use of younger, possibly more sensitive fish, which may necessitate a reevaluation of permit limits. SWRCB staff recommended to the Boards that new or renewed permit holders be allowed a time period in which laboratories can become proficient in conducting the new tests. Because this NPDES permit reduces the frequency of bioaasays from quarterly to annual, the Discharger should have adequate time before the first bioassay after this NPDES permit is reissued, to implement the new test method.

Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy

49. *Insufficient Ambient Background and Effluent Data*. Board staff's review of ambient background monitoring data found there were insufficient data to determine whether there was reasonable potential due to the second SIP trigger (B>WQO/WQC) for pollutants listed in the SIP. There was also insufficient effluent data to calculate numeric interim limits for copper and lead. This insufficiency of data will be addressed by requiring additional accelerated monitoring for copper and lead, so that interim limits can be determined.

50. On August 6, 2001, the Board sent a letter to all the permitted dischargers pursuant to Section 13267 of the California Water Code requiring the submittal of effluent and receiving water data on priority pollutants. This formal request for technical information addresses the insufficient effluent and ambient background data, and the dioxin study. The letter (described above) is referenced throughout the permit as the "August 6, 2001 Letter".

51. Pursuant to the August 6, 2001 Letter from Board Staff, the Discharger is required to submit workplans and sampling results for characterizing the levels of selected constituents in the effluent and ambient receiving water. The Discharger submitted a revised sampling plan on January 29, 2002, which the Executive Officer approved on April 22, 2002.

52. *Monitoring Requirements (Self-Monitoring Program).* The SMP includes monitoring at the outfall line for conventional, non-conventional pollutants, and acute toxicity. Much of the monitoring has not been changed from the previous Order. This Order requires bi-weekly monitoring for copper and lead, for developing performance based interim limits. As a result of the data review performed during the chlorine attenuation study, this Order requires monthly monitoring for residual chlorine.

CEQA and Public Hearings

53. *NPDES Permit.* This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.

54. *Notification.* The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharges and have been provided an opportunity to submit their written views and recommendations. Board staff prepared a Fact Sheet and Response to Comments, which are hereby incorporated by reference as part of this Order.

55. *Public Hearing.* The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code, regulations, and plans and policies adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the Discharger shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.

B. EFFLUENT LIMITATIONS

1. Effluent discharged into ACFCWCD Flood Channel (with eventual discharge to the lower San Francisco Bay) shall not exceed the following:

Constituent	Units	Monthly Average	Weekly Average	Instantaneous Maximum
Residual Chlorine[1]	mg/L			0.0

[1] The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, residual chlorine concentration, and sodium metabisulfate concentration (which could be interpolated) to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, the Executive Officer may conclude that chlorine residual exceedances are false positivies and not violations of this permit limit.

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

3. The average monthly discharge shall not exceed a flow limitation of 110,000 gallons per day.

4. Whole Effluent Acute Toxicity: Representative samples of the effluent shall meet the following limits for acute toxicity. Compliance with these limits shall be achieved in accordance with Provision D.5 of this Order:

   a. The survival of bioassay test organisms in 96-hour bioassays of undiluted effluent shall be:
      (1) A three (3)-sample median value of not less than 90 percent survival; and
      (2) A single (1) value of not less than 70 percent survival.

   b. These acute toxicity limits are further defined as follows:
      (1) **3-sample median limit**: Any bioassay test showing survival of 90 percent or greater is not a violation of this limit. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if one of the past two or fewer bioassay tests also show less than 90 percent survival.
      (2) **1-sample limit**: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

C. RECEIVING WATER LIMITATIONS

1. The discharges shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharges shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.

3. The discharges shall not cause the following limits to be violated in waters of the State at any one place within one foot of the water surface:

   a. Dissolved Oxygen: 7.0 mg/L, minimum

      The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharges shall not cause further reduction in ambient dissolved oxygen concentrations.

   b. Dissolved Sulfide: 0.1 mg/L, maximum

   c. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH by more than 0.5 pH units.

d. Un-ionized Ammonia: 0.025 mg/L as N, annual median; and
0.16 mg/L as N, maximum.

e. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

4. The discharges shall not cause a violation of any particular water quality standard for receiving waters adopted by the Board or the State Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. PROVISIONS

1. **Permit Compliance and Rescission of Previous Waste Discharge Requirements**
The Discharger shall comply with all sections of this Order beginning on August 1, 2003. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 97-007.

2. **Receiving Water Monitoring**
The Discharger shall collect or participate in collecting background ambient receiving water monitoring (upstream of point of discharge) for priority pollutants that is required to perform RPAs and calculate effluent limitations. To fulfill this requirement, the Discharger shall submit data sufficient to characterize the concentration of each toxic pollutant listed in the CTR in the ambient receiving water that will provide dilution for the discharge. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the receiving water at a point after the discharge has mixed with the receiving waters.

The Discharger submitted a sampling plan dated January 29, 2002, for the monitoring program. The Executive Officer conditionally approved this plan on April 22, 2002.

Final Report: The Discharger shall submit a final report that presents all the data to the Board 180 days prior to permit expiration. This final report shall be submitted with the application for permit reissuance.

Toxicity Requirements

3. **Whole Effluent Acute Toxicity**
Compliance with acute toxicity requirements of this Order shall be achieved in accordance with the following:
   a. Compliance with the acute toxicity effluent limits of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour flow through bioassays, or static renewal bioassays.
   b. Test organisms shall be rainbow trout or fathead minnow unless specified otherwise in writing by the Executive Officer.
   c. All bioassays shall be performed according to the most up-to-date protocols in 40CFR 136 (currently 5th edition), with exceptions if granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

Compliance Schedule Requirements

4. **Copper Compliance Schedule**
The Discharger shall comply with the following tasks and deadlines:

Task	Deadline
a. Discharger shall submit a report acceptable to the Executive Officer that identifies sources of copper at the plant based on additional source monitoring, and that proposes a work plan for how those sources may be reduced and controlled in order to achieve compliance with the final limits specified in this Order. Discharger may evaluate the feasibility of effluent reclamation and reuse projects, and site specific translators. Based on this information, the Board may reopen this Permit to establish additional interim requirements.	December 1, 2003
b. Submit annual report describing status of the work accomplished towards compliance with the WQBELs for copper.	June 1 of each year
c. Full compliance with final WQBEL Limitations for copper	March 31, 2010

5. **Lead Compliance Schedule**
The Discharger shall comply with the following tasks and deadlines:

Task	Deadline
a. Discharger shall submit a report acceptable to the Executive Officer that identifies sources of lead at the plant based on additional source monitoring, and that proposes a work plan for how those sources may be reduced and controlled in order to achieve compliance with the final limits specified in this Order. Discharger may evaluate the feasibility of effluent reclamation and reuse projects, and site specific translators. Based on this information, the Board may reopen this Permit to establish additional interim requirements.	December 1, 2003
b. Submit annual report describing status of the work accomplished towards compliance with the WQBELs for copper.	June 1 of each year
c. Full compliance with final WQBEL Limitations for lead	March 31, 2010

6. **Operations and Maintenance Manual**
The Discharger shall review, and update as necessary, its Operations and Maintenance Manual annually or within 90 days of completion of any significant facility or process changes. The Discharger shall submit to the Board, by April 30 of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

7. **Self-Monitoring Program**
   The Discharger shall comply with the Self-Monitoring Program (SMP) for this Order as adopted by the Board. The SMP may be amended by the Executive Officer pursuant to U.S. EPA regulations 40 CFR 122.62, 122.63, and 124.5.

8. **Standard Provisions and Reporting Requirements**
   The Discharger shall comply with all applicable items of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993 (attached), or any amendments thereafter. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in 'Standard Provisions', the specifications of this Order shall apply.

9. **Change in Control or Ownership**
   a. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Board.
   b. To assume responsibility of and operations under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order (see Standard Provisions & Reporting Requirements, August 1993, Section E.4.). Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

10. **Permit Reopener**
    The Board may modify or reopen this Order and Permit prior to its expiration date in any of the following circumstances:
    (1) If present or future investigations demonstrate that the discharge(s) governed by this Order and Permit will or have a reasonable potential to cause or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters. This may include submission of water quality data collected as required by the August 6, 2001 letter.
    (2) New or revised WQOs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this permit will be modified as necessary to reflect updated WQOs. Adoption of effluent limitations contained in this Order and Permit are not intended to restrict in any way future modifications based on legally adopted WQOs or as otherwise permitted under Federal regulations governing NPDES permit modifications;
    (3) If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified. The Discharger may request permit modification on this basis. The Discharger shall include in any such request an antidegradation and antibacksliding analysis.

11. **NPDES Permit**
    This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective on August 1, 2003, provided the U.S. EPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

12. **Order Expiration and Reapplication**
    a. This Order expires on July 31, 2008.
    b. In accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, the Discharger must file a report of waste discharge no later than 180 days before the expiration date of this Order as application for reissue of this permit and waste discharge requirements. The application shall be accompanied by a summary of all available water quality data including conventional pollutant data from no less than the most recent 3 years, and of toxic pollutant data no less than from the most recent 5 years, in the discharge and receiving water (see Provision D.2).

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 18, 2003.

_____
LORETTA K. BARSAMIAN
Executive Officer

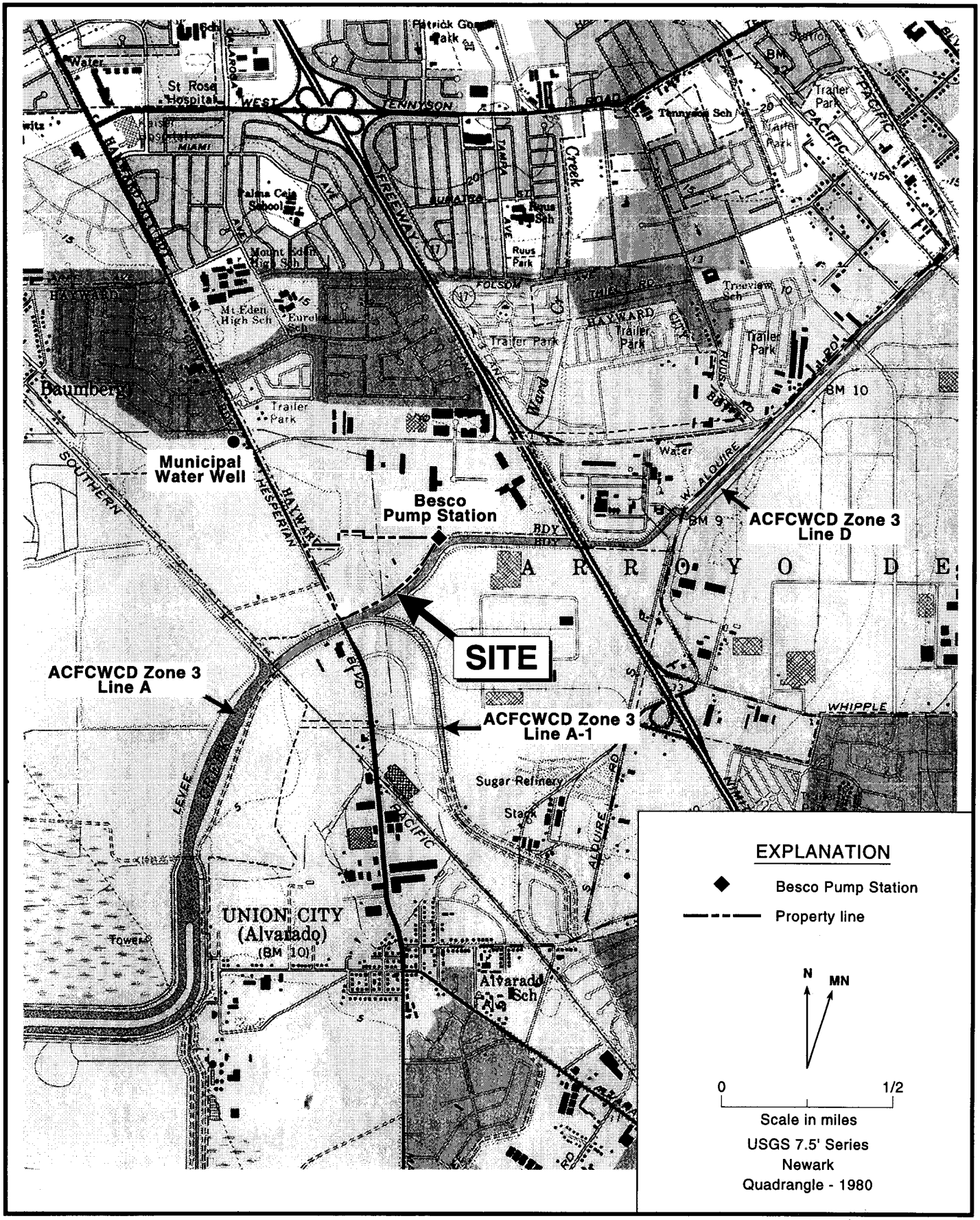
Attachments:
A. Discharge Facility Location Map
B. Discharge Facility Treatment Process Diagram
C. Self-Monitoring Program, Part B
D. Fact Sheet
E. Self-Monitoring Program, Part A (August 1993)*
F. Standard Provisions and Reporting Requirements (August 1993) *
G. Board Resolution No. 74-10*

**Note: Self-Monitoring Program Part A (August 1993), Standard Provisions and Reporting Requirements (August 1993), and Board Resolution No. 74-10 are not attached but are available for review or download on the Board's website at www.swrcb.ca.gov/rwqcb2*

ATTACHMENT A

Discharge Facility Location Map

Attachment A. Discharge Facility Location Map



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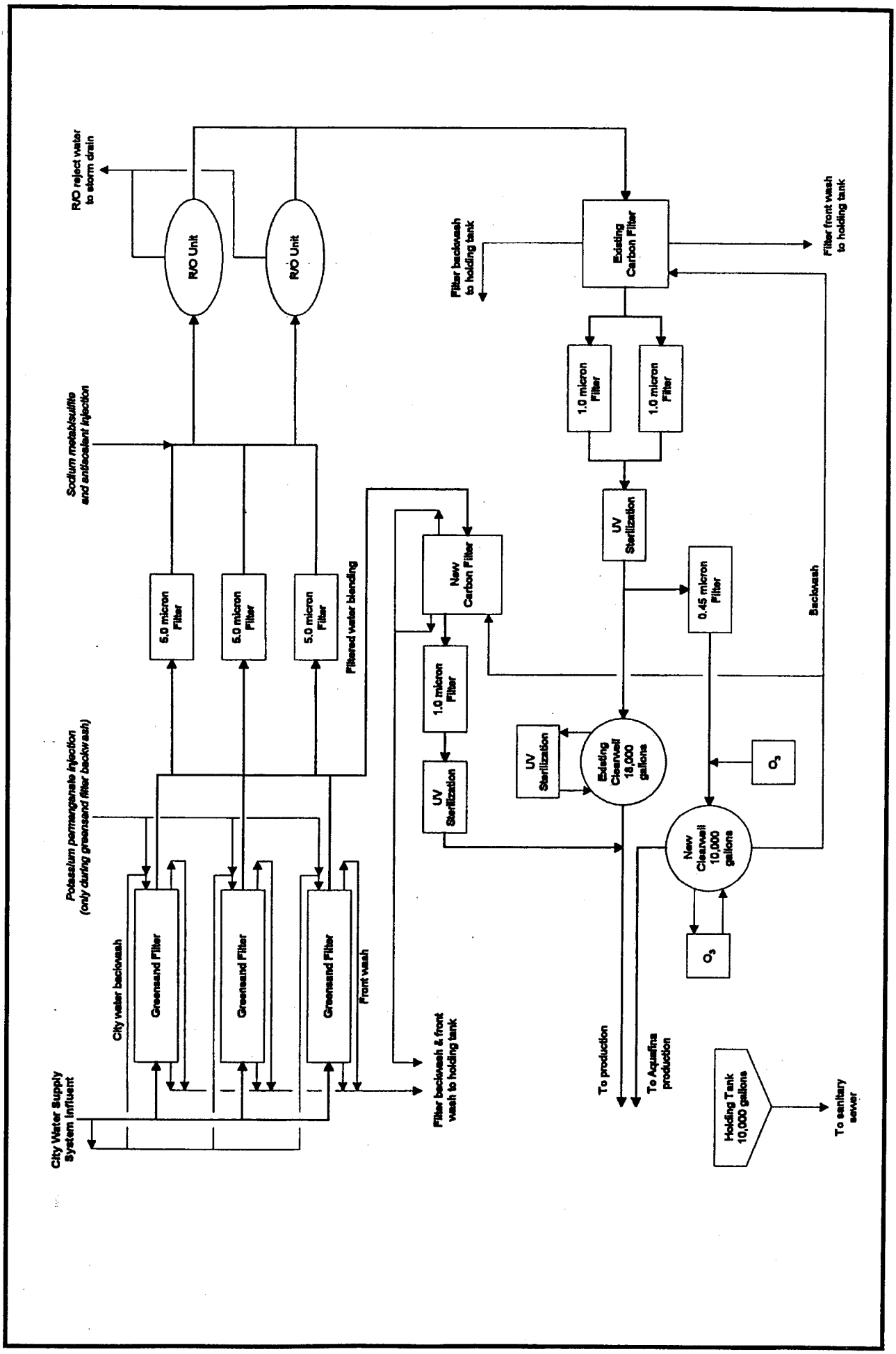
ATTACHMENT B

Discharge Facility Treatment Process Diagram

Attachment B. Discharge Facility Treatment Process Diagram



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ATTACHMENT C

Self-Monitoring Program, Part B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE

SELF-MONITORING PROGRAM

FOR

BOTTLING GROUP, LLC
HAYWARD, ALAMEDA COUNTY

NPDES PERMIT NO. CA0030058

ORDER NO. XXXX

Consists of:
Part A (not attached)
Adopted August 1993

and

Part B (Attached)
Adopted: June 18, 2003

Note: Part A (dated August 1993, Standard Provisions and Reporting Requirements for NPDES Surface Water Discharger Permits (dated August 1993), and Resolution No. 74-10 referenced in this Self Monitoring Program are not attached but are available for review or download on the Board's website at www.swrcb.ca.gov/rwqcb2.

SELF-MONITORING PROGRAM – Part B

I. Description of Sampling and Observation Stations

Station	Description
A. INFLUENT	
I-001	Located at any point in the pipe, which delivers raw water to the Discharger's reverse osmosis plant, prior to any point of use. If more than one pipe is involved in supplying raw water, the influent sample shall consist of a flow-proportioned composite from each of the sources.
B. EFFLUENT	
E-001	At a point in the outfall between the point of discharge and the point at which all wastes tributary to the discharge are present, prior to mixing of this discharge with other wastewater discharges not permitted by this Order.
E-001a	Located at any point in the 12,000 gallon storm-water interceptor or the downstream adjacent outlet box.

II. Schedule of Sampling, Measurements, and Analysis

A. The schedule of sampling, measurements, and analysis shall be that given in Table I (attached).

III. Reporting Requirements

A. General Reporting Requirements are described in Section E of the Board's *Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits*, dated August 1993.

B. Any overflow, bypass, or any significant noncompliance incident that may endanger health or the environment shall be reported within 24 hours in accordance with Sections F.1 and F.2 of SMP Part A. The date, time, duration, location, estimated volume of wastewater discharged, and corrective actions taken for these events shall be reported in monthly self-monitoring reports.

IV. Modifications to Part A

A. Exemptions from Part A: Self-Monitoring Report
This monitoring program does include the following sections of Part A: C.2d; C2.f; C.4; C.5; D.4, and E.3.

B. Modification to section F.1 of Part A: Self-Monitoring Report

1. The second sentence of section F.1 shall be modified as follows: "Spills shall be reported immediately after the occurrence to the Board at 510-622-2300 on weekdays during 8 a.m. to 5 p.m., and to the Office of Emergency Services at 1-800-852-7550 on weekends or when the spill occurred outside these hours."

2. Section F.1.b is revised to read: "Best estimate of volume involved…"

3. Section F.1.d is revised to read: "Cause of spill or overflow…"

4. Section F.1.i is revised to read: "Agencies or persons notified…."

C. Modification to section F.4 of Part A: Self-Monitoring Report:

Quarterly self-monitoring report: The purpose of the report is to document treatment performance, effluent quality and compliance with waste discharge requirements prescribed by this Order, as demonstrated by the monitoring program data and the Discharger's operation practices. The self-monitoring report (SMR) shall be submitted in accordance with the following:

1. The report shall be submitted to the Board on a quarterly basis, by the 30th day following the end of each quarter, on January 30, April 30, July 30, and October 30.

2. *Letter of Transmittal:* Each report shall be submitted with a letter of transmittal. This letter shall include the following:
   a. Identification of all violations of effluent limits or other discharge requirements found during the monitoring period;
   b. Details of the violations: parameters, magnitude, test results, frequency, and dates;
   c. The cause of the violations;
   d. Discussion of corrective actions taken or planned to resolve violations and prevent recurrence, and dates or time schedule of action implementation. If previous reports have been submitted that address corrective actions, reference to such reports is satisfactory;
   e. Signature: The letter of transmittal shall be signed by the Discharger's principal executive officer or ranking elected official, or duly authorized representative, and shall include the following certification statement:

      "I certify under penalty of law that this document and all attachments have been prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

3. *Compliance Evaluation Summary:* Each report shall include a compliance evaluation summary. This summary shall include, for each parameter for which effluent limits are specified in the Permit, the number of samples taken during the monitoring period, and the number of samples in violation of applicable effluent limits.

4. *Results of Analyses and Observations*.
   a. Tabulations of all required analyses and observations, including parameter, sample date and time, sample station, and test result;
   b. If any parameter specified in Table 1 of Part B is monitored more frequently than required by this permit and SMP, the results of this additional monitoring shall be included in the monitoring report, and the data shall be included in data calculations and compliance evaluations for the monitoring period;
   c. Calculations for all effluent limits that require averaging of measurements shall utilize an arithmetic mean, unless specified otherwise in this permit or SMP.

5. *Effluent Data Summary – U.S. EPA NPDES Discharge Monitoring Reports:* Summary tabulations of monitoring data including maximum, minimum and average values for subject monitoring period shall be reported in accordance with the format given by the U.S. EPA NPDES Discharge Report(s) (DMRs; U.S. EPA Form 3320-1 or successor). Copies of these DMRs shall be provided to U.S. EPA as required by U.S. EPA.

6. *Data Reporting for Results Not Yet Available*: The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in timely manner. The Board recognizes that certain analyses require additional time in order to complete analytical processes and result reporting. For cases where required monitoring parameters require additional time to complete analytical processes and reporting, and results are not available in time to be included in the SMR for the subject monitoring period, such cases shall be described in the SMR. Data for these parameters, and relevant discussions of any observed violations, shall be included in the next following SMR after the data become available.

7. *Report Submittal*: The Discharger shall submit SMRs to:
   Executive Officer
   San Francisco Bay Regional Water Quality Control Board
   1515 Clay Street, Suite 1400
   Oakland, CA 94612
   Attn: NPDES Division

D. Modification to section F.5 of Part A: Annual Report:

An Annual Report shall be submitted for each calendar year. The report shall be submitted to the Board by March 1 of the following year. This report shall include the following:

1. Both tabular and graphical summaries of monitoring data collected during the calendar year that characterizes treatment plant performance and compliance with waste discharge requirements.

2. A comprehensive discussion of treatment plant performance and compliance with waste discharge requirements. This discussion should include any corrective actions taken or planned such as changes to facility equipment or operation practices which may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment or disposal practices.

E. Additions to Part A of Self-Modification Program:

1. Reporting Data in Electronic Format:

The Discharger has the option to submit all monitoring results in electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit the SMRs electronically, the following shall apply:

a. *Reporting Method*: The Discharger shall submit SMRs electronically via the process approved by the Executive Officer in a letter dated December 17, 1999, Official Implementation of Electronic Reporting System (ERS).
b. *Modification of reporting requirements:* Reporting requirements F.4 in the attached *Self-Monitoring program, Part A*, dated August 1993, shall be modified as follows. In the future, the Board intends to modify Part A to reflect these changes.
c. Quarterly Report Requirements: For each quarter, a self-monitoring report (SMR) shall be submitted to the Board in accordance with the following:

i. The report shall be submitted to the Board no later than 30 days from the last day of the reporting quarter, on January 30, April 30, July 30, and October 30.

ii. Letter *of Transmittal:* Each report shall be submitted with a letter of transmittal. This letter shall include the following:

(i) Identification of all violations of effluent limits or other discharge requirements found during the monitoring period;

(ii) Details of the violations: parameters, magnitude, test results, frequency, and dates;

(iii) The cause of the violations;

(iv) Discussion of corrective actions taken or planned to resolve violations and prevent recurrence, and dates or time schedule of action implementation. If previous reports have been submitted that address corrective actions, reference to such reports is satisfactory.

(v) Signature: The letter of transmittal shall be signed by the Discharger's principal executive officer or ranking elected official, or duly authorized representative, and shall include the following certification statement:

"I certify under penalty of law that this document and all attachments have been prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

(vi) Compliance Evaluation Summary: Each report shall include a compliance evaluation summary. This summary shall include the number of samples in violation of applicable effluent limits.

(vii) Results of Analyses and Observations.

(viii) Tabulations of all required analyses and observations, including parameter, sample date, sample station, and test result.

(ix) If any parameter is monitored more frequently than required by this permit and SMP, the results of this additional monitoring shall be included in the monitoring report, and the data shall be included in data calculations and compliance evaluations for the monitoring period.

(x) Calculations for all effluent limits that require averaging of measurements shall utilize an arithmetic mean, unless specified otherwise in this permit or SMP.

d. Data Reporting for Results Not Yet Available: The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. The Board recognizes that certain analyses require additional time in order to complete analytical processes and result reporting. For cases where required monitoring parameters require additional time to complete analytical processes and reporting, and results are not available in time to be included in the SMR for the subjected monitoring period, such cases shall be described in the SMR. Data for these parameters, and relevant discussions of any observed violations, shall be included in the next following SMR after the data become available.

V. Self-Monitoring Program Certification

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Board Order No. XXXX-.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger, and revisions will be ordered by the Executive Officer.

3. Is effective as of August 1, 2003.

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LORETTA K. BARSAMIAN
Executive Officer

Attachment: Table I – Schedule for Sampling, Measurements, and Analyses

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES [1]

Sampling Station	**I-001**		**E-001**	
Type of Sample **Parameter** (units) [notes]	G	Co	G	Co
Flow rate (mgd) [1]	D			D
Chlorine residual (mg/L) [2]			M	
Total Dissolved Solids (mg/L)			M	
Acute Toxicity (% Surv) [3]			Q	
pH (s.u.)			W	
Temperature (°C)			W	
Copper (µg/L) [4]			2/M	
Lead (µg/L) [4]			2/M	
Mercury (µg/L) [5]			A	
Silver (µg/L) [4]			Q	
Zinc (µg/L) [4]			Q	
Standard Observations			W	
Sodium Metabisulfite Observations [6]	D			

LEGEND FOR TABLE 1

Type of Stations:
I = treatment influent
E = treatment facility effluent

Frequency of Sampling:
D = once each day
W = once each week
2/M = twice each month
M = once each month
Q = once each calendar quarter (at least two months apart)
A = once each calendar year, timing of sampling should vary from year to year

Types of Samples:
Co = continuous sampling
G = grab sample

FOOTNOTES FOR TABLE 1

[1] Flow Monitoring: Flows shall be measured continuously and recorded daily, except on weekends and holidays when Discharger's facility has limited staff to take measurements. Over these periods, an average flow may be reported by dividing the total flow volume by the period, with a note indicating the values are averages taken over multiple days. The following information shall also be reported quarterly:

Average Daily Flow (mgd)
Maximum Daily Flow (mgd)
Minimum Daily Flow (mgd)

[2] Chlorine Residual:
The Discharger shall use an analytical method with a method detection limit no greater than 0.05 mg/L. The residual chlorine level is considered in violation if it is at or above 0.05 mg/L.

If residual chlorine measurements at E-001 are found to be above the permit effluent limitation, an alternative sample may be immediately collected at E-001a and measured to account for possible attenuation of residual chlorine in the storm drain system. The measurement at E-001a may be reported for compliance purposes, if the Board is notified within 24 hours, and the event and E-001 measurement are described in the transmittal letter of the self-monitoring report.

[3] Fish Toxicity shall be determined using 96-hour, static-renewal bioassays using grab samples representative of the discharged effluent. The test specie shall be either fathead minnow or rainbow trout. Effluent used for fish bioassays must be undiluted, dechlorinated effluent.

The bioassay water shall be tested for pH, dissolved oxygen, and temperature at the start of the bioassay, and then daily for the duration of the bioassay test (i.e., at 0, 24, 48, 72, and 96 hours from the start of the bioassay test).

[4] Copper, lead, silver, and zinc samples may be grabs or 24-hour composites. Composite samples may be from a continuous compositing sampler, or may be made up of discrete grabs collected through out the day.

[5] Ultra-clean sampling techniques, to the maximum extent practicable, and low-level analytical Method 1631B shall be used.

[6] The Discharger shall check on a daily basis the sodium metabisulfite pumps and tanks, and notify the Board within 24 hours via telephone if they are not operating as intended while discharging. This requirement will provide some assurance to the Board that a monthly frequency of monitoring of residual chlorine is adequate for compliance determination.